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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/840,070	05/05/2004	Roy J. Riccomini	PA2210US	6645

22830 7590 06/29/2005

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EXAMINER

OSORIO, RICARDO

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/840,070	Applicant(s) RICCOMINI ET AL.	
	Examiner RICARDO L. OSORIO	Art Unit 2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4, 5, 6, 8-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudoh (6,751,312) in view of Oueslati et al (6,806,865).

Regarding claims 1 and 9, Kudoh teaches of a hand-held computing device (col. 1, lines 12-14) comprising: a housing sized to be held in hands of a user during operation of the device (Fig. 1, reference character 102), the housing having an upper surface defining a first plane (Fig. 1, reference character 104); a display disposed on the upper surface of the housing (Fig. 1, reference character 108); and a set of controls integrated with the housing for providing user input to a processor, the set of controls being positioned about the housing so as to enable manipulation by digits of the user, the set of controls including at least one input device for generating a signal representing displacement information (see col. 1, line 42-col. 2, line 6). However, Kudoh does not precisely teach that the input device is an analog input device for generating an analog signal.

Oueslati teaches of a joypad (125), that can be converted into a joystick (230), which is analog input device that communicates a analog signal to computer electronics of a handheld computer representing displacement information (Fig. 1, and col. 3, lines 41-50).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the input device of Kudoh to be analog, as taught by Oueslati, because the use of analog input devices, such as joysticks, joypads, and trackballs is overwhelmingly known in the art of handheld computing devices.

Regarding claims 2 and 10, Kudoh teaches that the analog input device comprises a joystick terminating at its upper end in a cap (col. 4, lines 51-53).

Regarding claims 4 and 13, Kudoh teaches that the cap comprises a concave shaped top (Fig. 6, reference character 8A).

Regarding claims 5, 6, and 11, Kudoh teaches that the cap is disposed at least partially in a well located within, or defined by a portion of, the upper surface such that the cap does not protrude substantially above the first plane (col. 6, lines 7-10).

Regarding claim 8, Kudoh teaches that the at least one analog input device is configured to generate first and second analog signals representative of displacement in a first and a second mutually orthogonal dimensions (see col. 1, line 42-col. 2, line 6).

3. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudoh (6,751,312) in view of Oueslati et al (6,806,865) as applied to claim 1, 2, 4, 5, 6, 8-11 and 13 above, and further in view of Slotta (6,724,369).

Regarding claims 3 and 12, Kudoh, as anticipated by Oueslati, fails to specifically teach of the cap comprising a convex shaped top.

Slotta teaches of a cap comprising a convex shaped top (Fig. 11, reference character 505). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the joystick cap with a convex shaped top, as taught by Slotta, in the device of

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Kudoh and Oueslati since it is well known in the art of pointing sticks to use joystick caps shaped either convex or concave, alternately, as desired by the user/manufacturer to suite the comfort or practicality of the user, for example, a concave cap helps the user at least in resting his finger on it, and the convex cap helps the user at least in identifying the cap easier and for tactile feedback purposes (see Fig. 9, reference character 408, Fig. 11, reference character 505, col. 8, lines 44-46, and col. 9, lines 8-10).

4. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudoh (6,751,312) in view of Oueslati et al (6,806,865) as applied to claim 1, 2, 4, 5, 6, 8-11 and 13 above, and further in view of Martin et al. (6,563,487).

Regarding claims 7 and 14, Kudoh, as anticipated by Oueslati, fails to specifically teach that the analog input device comprises a trackball.

Martin teaches that a trackball can be used instead of the joystick (col. 5, line 64-col. 6, line 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the trackball, as taught by Martin, instead of the joystick of Kudoh, in the combined device of Kudoh and Oueslati since the joystick and the trackball can be interchangeably used for operating similarly (col. 6, lines 3-5).

5. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudoh (6,751,312) in view of Oueslati et al (6,806,865) as applied to claim 1, 2, 4, 5, 6, 8-11 and 13 above, and further in view of Grome et al (6,580,418).

Regarding claim 15, Kudoh, as anticipated by Oueslati, fails to specifically teach that the means to provide user input includes at least a potentiometer.

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Grome teaches that the means to provide user input includes at least a potentiometer (col. 4, lines 25-28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the potentiometer, as taught by Grome, in the device of Kudoh and Oueslati because a potentiometer is well known in the art of sensors to be one of other possible choices of position sensors used to produce a signal indicative of the angular position of the control handle (col. 4, lines 25-28).

Regarding claim 16, Kudoh, as anticipated by Oueslati, fails to specifically teach of means for limiting force resulting from manipulation by the digits of the user.

Grome teaches of means for limiting force resulting from manipulation by the digits of the user (col. 14, lines 53-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the limiting means, as taught by Grome, in the device of Kudoh and Oueslati because calibration is well known in the art of calibration to set the boundaries of use of input devices and how the different actions or movements of the input devices will be read, in this case, a joystick (col. 14, lines 53-65).

Response to Arguments

6. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricardo L. Osorio whose telephone number is 703 305-2248. The examiner can normally be reached on Monday through Thursday from 7:00 A.M. to 5:30

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P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala whose telephone number is 703 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

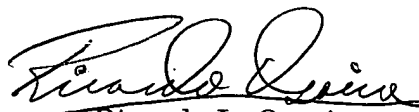
Washington, D.C. 20231

or faxed to:

703 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ricardo L. Osorio

Examiner

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RLO

June 27, 2005